

## **REMARKS**

Claims 1-9, 11-13, and 19-36 are pending in the application. Claims 1-9, 11-13, and 19-36 stand rejected. Applicant requests the Examiner reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

### **REJECTION UNDER 35 U.S.C. § 103**

Claims 1-4, 6-9, 11-13, 19-27, and 29-36 stand rejected under 35 U.S.C. § 103(a) as being obvious over Chen et al. (U.S. Pat. No. 6,314,192) in view of Ding et al. (U.S. Pat. No. 5,699,361). This rejection is respectfully traversed.

Chen et al. is generally directed toward information embedding using an ensemble of non-intersecting embedding generators. The Examiner remarks that Chen et al. teaches embedding authentication data obtained from two different media channels in one another. However, there is no teaching in Chen et al. that the host signal contains two channels. Moreover, the Examiner admits that Chen et al. does not teach a multimedia signal. Thus, Chen et al. does not teach, suggest, or motivate embedding authentication data obtained from two or more different media channels of a multimedia signal in one another for purposes of cross verification.

Ding et al. is generally directed toward a multimedia channel formulation mechanism. The Examiner relies on Ding et al. to teach simultaneous formulation and allocation of three different channels (column 9, lines 5-10). Yet, the suggested combination of the teachings Chen et al. and Ding et al. does not arrive at Applicant's claimed invention. In particular, neither Chen et al. nor Ding et al. teach that an active data stream is inserted into a high capacity region of a visual channel, while other control data are embedded into a relatively high robustness region of the visual channel,

the high capacity region having higher capacity and lower robustness than the high robustness region. Accordingly, neither Ching et al. nor Deng et al. disclose how to solve the problems of embedding authentication data obtained from two or more different media channels of a multimedia signal in one another for purposes of cross verification, , especially where an active data stream is being embedded as part of or in concert with the authentication data.

Applicant's claimed invention is generally directed toward embedding authentication data obtained from two or more different media channels of a multimedia signal in one another for purposes of cross verification. In particular, Applicant's claimed invention solves the problem of embedding an active data stream. For example, each of independent claims 1, 22, and 36, as amended, recite "an active data stream is inserted into a high capacity region of a visual channel, while other control data are embedded into a relatively high robustness region of the visual channel, the high capacity region having higher capacity and lower robustness than the high robustness region". Thus, neither Chen et al. nor Ding et al., alone or combined, teach, suggest, or motivate all of the subject matter recited in the independent claims. These differences are significant because the recited embedding technique helps to solve the problems of embedding across media channels. Support for the amendments may be found in the Specification as originally filed at: (a) page 8, line 6 through page 9, line1; (b) page 10, lines 17 through 19; and (c) page 17, lines 5 through 7.

Accordingly, Applicant respectfully requests the Examiner reconsider and withdraw the rejection of independent claims 1, 22, and 36 under 35 U.S.C. 103(a), along with rejection on these grounds of all claims dependent therefrom.

Claim 5 and 28 stand rejected under 35 U.S.C. § 103(a) as being obvious over Chen et al. (U.S. Pat. No. 6,314,192) in view of Ding et al. (U.S. Pat. No. 5,699,361) and Numao et al. (U.S. Pat. No. 6,512,835). This rejection is respectfully traversed.

For discussion of Chen et al. and Ding et al., Applicant respectfully directs the Examiner's attention to remarks detailed above with respect to rejection of claims 1-4, 6-9, 11-13, 19-27, and 29-36.

Numao et al. is generally directed toward data hiding and extraction methods. In particular, Numao et al. is directed toward scattering hidden data in image or sound with an array of pointers to the scatter locations. However, Numao et al. does not teach that an active data stream is inserted into a high capacity region of a visual channel, while other control data are embedded into a relatively high robustness region of the visual channel, the high capacity region having higher capacity and lower robustness than the high robustness region. Accordingly, Numao et al. does not disclose how to solve the problems of embedding authentication data obtained from two or more different media channels of a multimedia signal in one another for purposes of cross verification, especially where an active data stream is being embedded as part of or in concert with the authentication data.

Applicant's claimed invention is generally directed toward embedding authentication data obtained from two or more different media channels of a multimedia signal in one another for purposes of cross verification. In particular, Applicant's claimed invention solves the problem of embedding an active data stream. For example, each of independent claims 1, 22, and 36, as amended, recite "an active data stream is inserted into a high capacity region of a visual channel, while other control

data are embedded into a relatively high robustness region of the visual channel, the high capacity region having higher capacity and lower robustness than the high robustness region". Thus, neither Chen et al., Ding et al., nor Numao et al., alone or combined, teach, suggest, or motivate all of the subject matter recited in the independent claims. These differences are significant because the recited embedding technique helps to solve the problems of embedding across media channels. Support for the amendments may be found in the Specification as originally filed at: (a) page 8, line 6 through page 9, line1; (b) page 10, lines 17 through 19; and (c) page 17, lines 5 through 7.

Accordingly, Applicant respectfully requests the Examiner reconsider and withdraw the rejection of dependent claims 5 and 28 under 35 U.S.C. 103(a) based on their dependence from allowable base claims.

## CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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By: Greg Stobbs  
Gregory A. Stobbs,  
Reg. No. 28,764

HARNESS, DICKEY & PIERCE, P.L.C.  
P.O. Box 828  
Bloomfield Hills, Michigan 48303  
(248) 641-1600

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